WHEELED EXCAVATOR

SERVICE MANUAL

R55-7

HYUNDAI

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3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	16.2/4.5cc/rev
Maximum pressure	220/30kgf/cm²(3130/430psi)
Rated oil flow	35.6/9.9 / /min(9.4/2.6U.S. gpm/7.8/2.2U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	Sectional, 10 spools+1 option
Operating method	Hydraulic pilot system+Mechanical control system
Main relief valve pressure	220kgf/cm²(3130psi)
Overload relief valve pressure	240kgf/cm²(3410psi)

5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	28.87cc/rev
Relief pressure	200kgf/cm²(2840psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	14kgf · m(101lbf · ft)
Brake release pressure	20~40kgf/cm²(284~570psi)
Reduction gear type	2 - stage planetary
Swing speed	9.6rpm

6) TRAVEL MOTOR

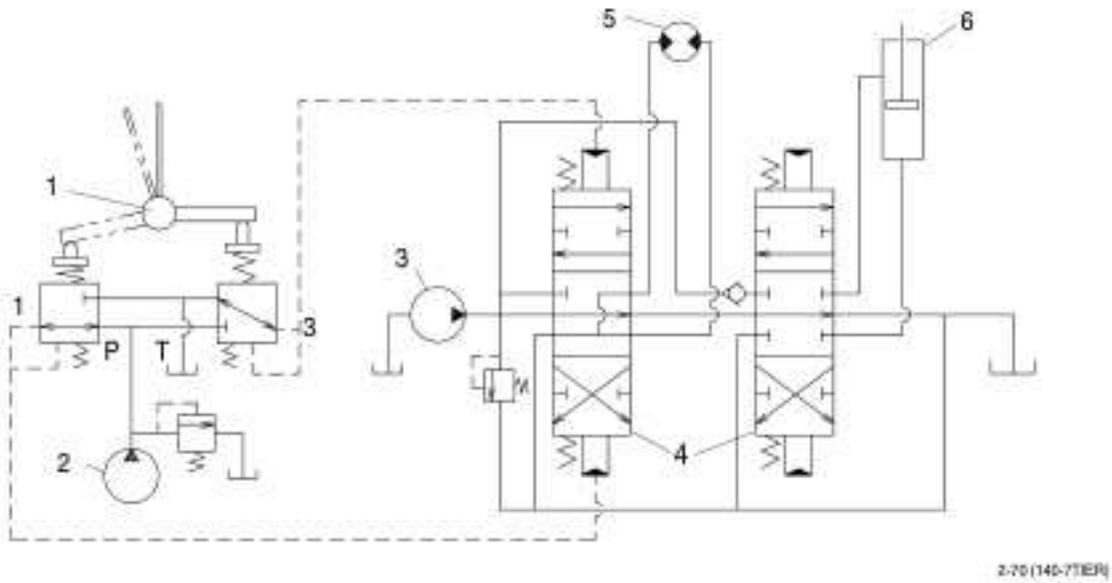
Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	220kgf/cm²(3130psi)
Reduction gear type	2-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	9kgf/cm²(128psi)
Braking torque	8.4kgf · m(61lbf · ft)

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3) OPERATION

The operation of the pilot valve will be described on the basis of the hydraulic circuit diagram shown below and the attached operation explanation drawing.

The diagram shown below is the typical application example of the pilot valve.

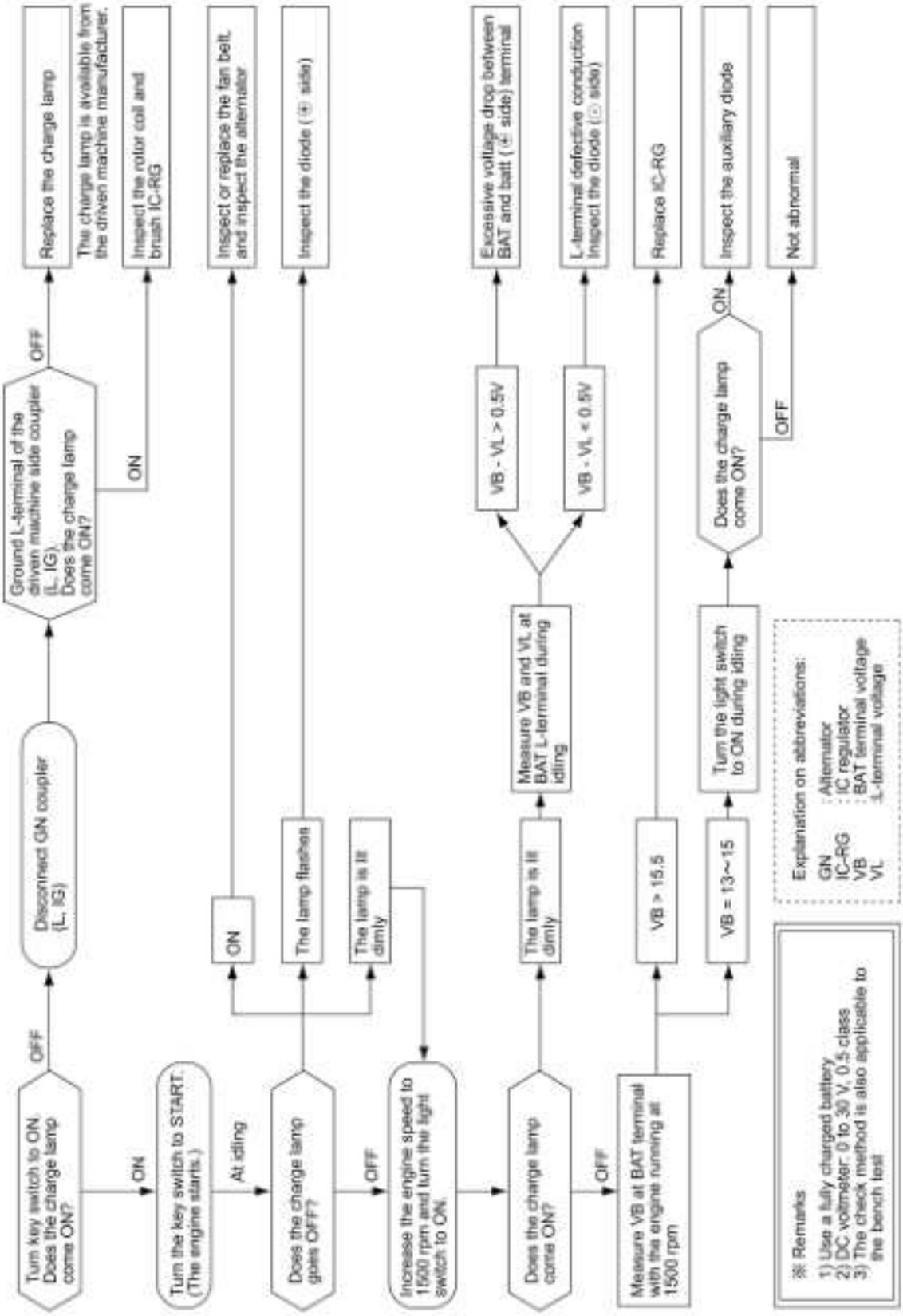


2-70 (140-7TIER)

1	Pilot valve	3	Main pump	5	Hydraulic motor
2	Pilot pump	4	Main control valve	6	Hydraulic cylinder

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10.1.6 Troubleshooting



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(5) Assembling the shaft

① Fit the shaft into the bearing(With the bearing in the bottom) by using the press machine and jig. If the press is not available, use the jig in the similar manner and drive the shaft into the bearing by knocking with a plastic hammer.



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② Install the C-type stop ring to fix the bearing.



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③ Assembling the shaft.
Assemble the shaft into the housing.
Knock the spline end lightly with a plastic hammer and fix the bearing outer ring firmly into the housing hole.



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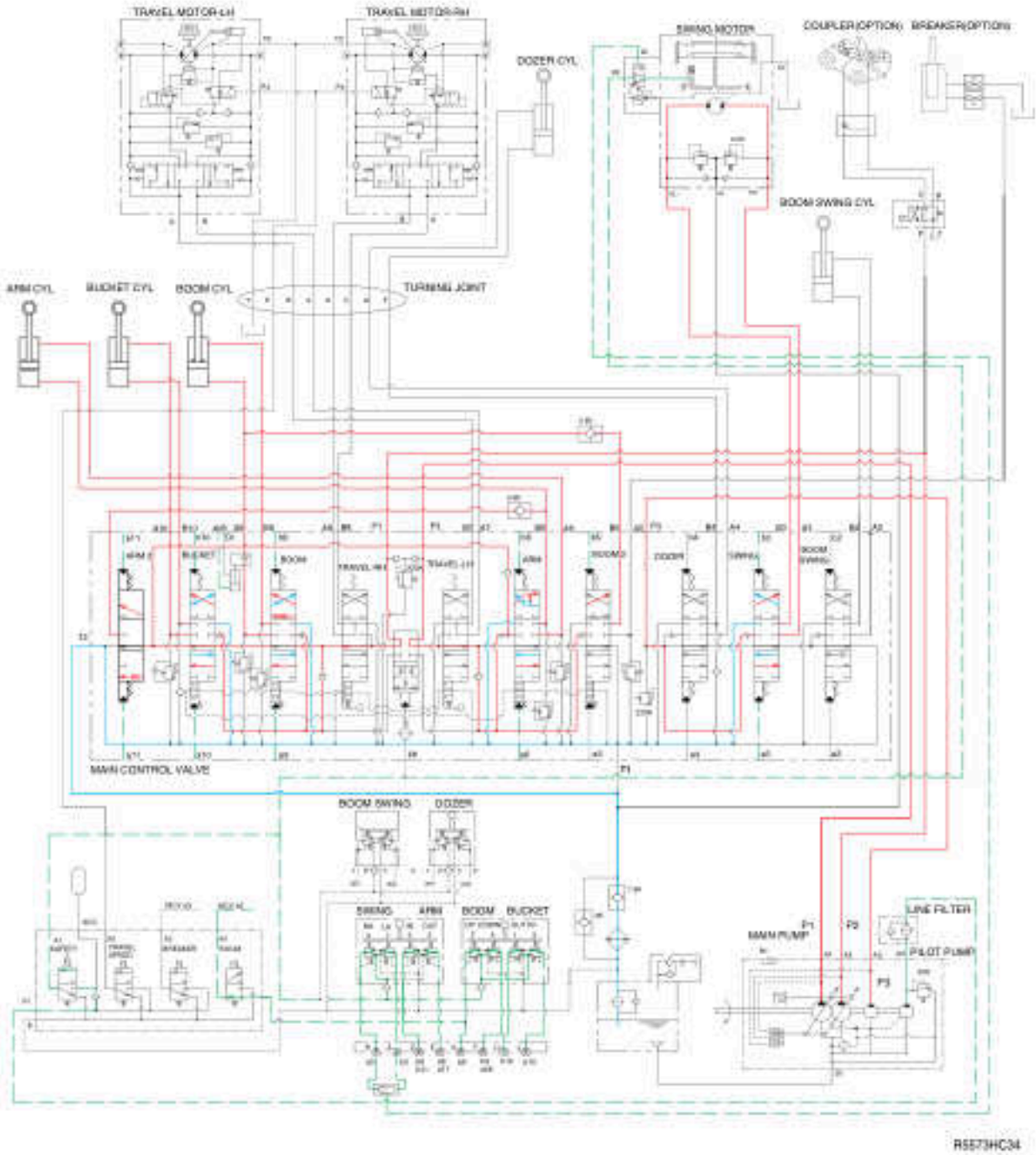
(6) Apply grease to the O-ring for assembling.



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5. COMBINED SWING, BOOM, ARM AND BUCKET OPERATION



When the swing, boom, arm and bucket functions are operated, simultaneously each spool in the main control valve is moved to the functional position by the pilot oil pressure from the remote control valve.

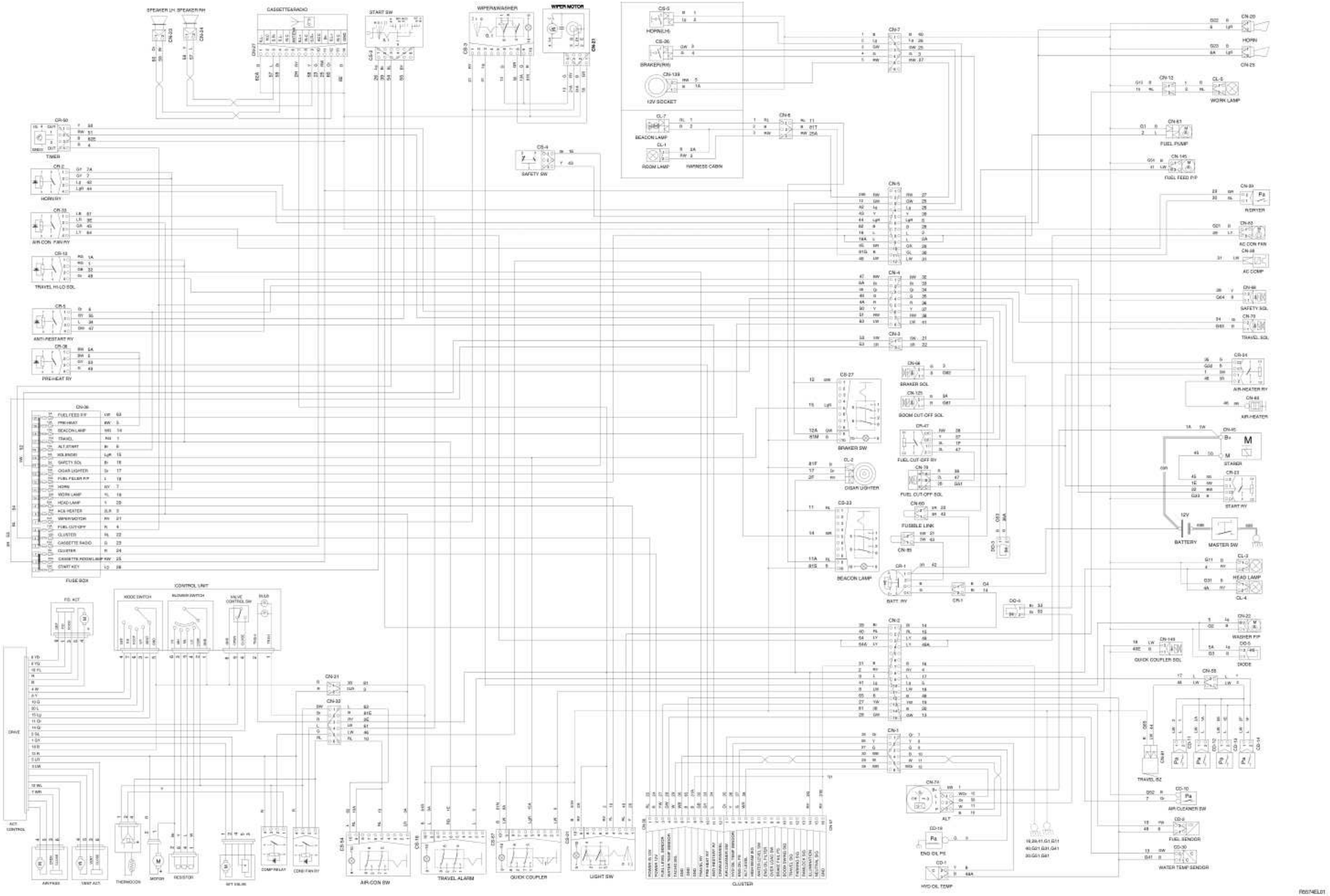
The oil from the P1 pump flows into the boom cylinders and arm cylinder through boom 2 spool, arm spool.

The oil from the P2 pump flows into the boom cylinders, arm cylinder and bucket cylinder through the boom spool, arm 2 spool, bucket spool.

The oil from the P3 pump flows into the swing motor through the swing spool.

The superstructure swings and the boom, arm and bucket are operated.

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